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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,392	10/09/2003	Puthukode G. Ramachandran	AUS920030734US1	8364

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IBM CORP (YA)
C/O YEE & ASSOCIATES PC
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER

GUZMAN, APRIL S

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/682,392

Applicant(s)

RAMACHANDRAN, PUTHUKODE
G.

Examiner

April S. Guzman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement submitted on October 9, 2003 been considered by the Examiner and made of record in the application file.

Specification

2. The disclosure is objected to because of the following minor informalities:
 - a) On **page 2 line 19**, replace "IEE" with --IEEE--.
 - b) On **page 13 line 30**, insert --of-- after "form" and before the word "data".
 - c) On **page 14 line 8**, replace "Medium" with --medium--.
3. The use of the trademark JAVA has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

Claim Objections

4. **Claims 6 and 17** are objected to because of the following informalities:
 - a) Consider **claim 6**, on **line 2**, replace "the" with --a--.
 - b) Consider **claim 17**, on **lines 15-17**, replace "second instructions, in response to receiving a response to the data, for determining the signal strength" with --second

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instructions for determining the signal strength, in response to receiving a response to the data--.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 17 claims a computer program product in a computer readable medium where the specification specifically mentions examples of computer readable medium that include wireless communications links using transmission forms, such as, radio frequency and light wave transmissions which do not fall under statutory subject matter.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-2, 7, 9-10, 13-14, 17-18** are rejected under 35 U.S.C. 102(e) as being anticipated by **Lee et al. (U.S. Patent Application Publication # US 2004/0203549)**.

Consider **claim 1**, Lee et al. clearly show and disclose a wireless network apparatus (wireless communication device) (Abstract, Figure 1, Figure 3 wireless network card 10, and [0007], [0023]-[0024]) comprising:

a housing (it is inherent that the wireless network card 10 includes a housing in itself, see Figure 1, and [0023]);

a bus interface (first judgement signal 321 and second judgement signal 322) located inside the housing, wherein the bus interface provides a connection to a data processing system (judgement device 32) (Figure 3, [0042], and [0044]);

a transceiver (wireless network card 10) located inside the housing, wherein the transceiver sends and receives data from a wireless connection (Figure 3, [0024], [0043], and [0045]);

a data buffer (buffer 31) located inside the housing and being connected to the bus interface and the transceiver, wherein the data buffer holds data for transfer between the bus interface and the transceiver (Figure 3, and [0042]-[0045]);

a display device (indication members 11) located on an exterior of the housing, wherein the display device is located on the exterior of the wireless network apparatus (wireless network card 10) in a location (indication zone 111) for viewing by a human user (Figure 1, [0016], and [0024]-[0025]); and

a control unit (drive circuit 30) located within the housing, wherein the control unit controls the transfer of data through the data buffer (drive circuit 30 includes a buffer 31 which includes a first input port 311 for inputting the control value, second input port 312 for inputting an enabling signal, and an output port 313 for connecting to the indication

members 11), identifies a signal strength for the wireless connection (drive circuit 30 further includes a judgement device 32 which may output a potential signal to function as an enabling signal 323 so as to drive the buffer 31), and displays the signal strength on the display device (drive circuit 30 operated to decide if one, some or all of the indication members 11 are to be lighted) ([0042], and [0044]-[0045]).

Consider **claim 2, as applied to claim 1 above**, Lee et al. clearly show and disclose the display device (indication members 11) as a set of light emitting diodes (LED) arranged in an array (Figure 1, [0024]-[0025], and [0042]).

Consider **claim 7, as applied to claim 1 above**, Lee et al. clearly disclose the wireless network apparatus (wireless communication device) is a wireless network card (wireless network card 10) (Figure 1, [0017], and [0023]-[0024]).

Consider **claim 9**, Lee et al. clearly show and disclose a method in a wireless network card (wireless network card 10) for indicating a signal strength (Figure 2, [0011], and [0027]), the method comprising:

sending data to a network from the wireless network card (read as initializing the wireless network card, and allocating multiple I/O address spaces; querying the information records of the medium access control (MAC) layer of the PCMCIA interface, to obtain a signal strength value) (Figure 2, [0012]-[0013], and [0029]-[0030]);

in response to receiving a response to the data, determining the signal strength (determining a control value according to the signal strength value) (Figure 2, [0014], [0031], and [0034]); and

displaying the signal strength on a display device on an exterior of the wireless network card (sending the control value to the multiple I/O address spaces, to control operation of the multiple indication members 11 wherein the indication members 11 are located on the exterior of the wireless network card 10) (Figure 2, [0015], and [0032]).

Consider **claim 10, as applied to claim 9 above**, Lee et al. clearly show and disclose the display device (indication member 11) is an array of light emitting diodes (LED1, LED2, LED3, and LED4) (multiple properly arranged indication members 11 wherein the indication members 11 are disclosed as LEDs) (Figure 1, Figure 3, [0024]-[0025], and [0042]).

Consider **claim 13**, Lee et al. disclose a data processing system in a wireless network card for indicating a signal strength (Figure 3, and the method disclosed in [0011]-[0015] and [0027]-[0032] inherently constitutes a system), the data processing system comprising:

sending means for sending data to a network from the wireless network card (the wireless network card 10 transmits or receives signals; therefore, sending means is inherent in the wireless network card 10) (Abstract, [0013], [0030], [0024], and [0043]);

determining means (judgement device 32 within the drive circuit 30) for determining the signal strength, in response to receiving a response to the data (Abstract, Figure 2, Figure 3, and [0044]); and

displaying means (indication members 11) for displaying the signal strength on a display device (indication members 11) located on an exterior of the wireless network card (wireless network card 10) (Abstract, Figure 1, Figure 3, [0024], and [0042]).

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Consider **claim 14, as applied to claim 13 above**, Lee et al. clearly show and disclose the display device (indication member 11) is an array of light emitting diodes (LED1, LED2, LED3, and LED4) (multiple properly arranged indication members 11 wherein the indication members 11 are disclosed as LEDs) (Figure 1, Figure 3, [0024]-[0025], and [0042]).

Consider **claim 17**, Lee et al. disclose a method for indicating a signal strength which is inherently composed in a computer program product in a computer readable medium (wireless network card 10), the computer program product comprising:

first instructions for sending data to a network from the wireless network card (initializing the wireless network card, and allocating multiples I/O address spaces; querying the information records of the medium access control (MAC) layer of the PCMCIA interface, to obtain a signal strength value) (Figure 2, [0012]-[0013], and [0029]-[0030]);

second instructions for determining the signal strength (determining a control value according to the signal strength value) in response to receiving a response to the data (Figure 2, [0014], [0031], and [0034]); and

third instructions for displaying the signal strength on a display device located on an exterior of the wireless network card (sending the control value to the multiple I/O address spaces, to control operation of the multiple indication members 11 wherein the indication members 11 are located on the exterior of the wireless network card 10) (Figure 2, [0015], and [0032]).

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Consider **claim 18, as applied to claim 17 above**, Lee et al. clearly show and disclose the display device (indication member 11) is an array of light emitting diodes (LED1, LED2, LED3, and LED4) (multiple properly arranged indication members 11 wherein the indication members 11 are disclosed as LEDs) (Figure 1, Figure 3, [0024]-[0025], and [0042]).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 3-4, 11, 15, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al. (U.S. Patent Application Publication # US 2004/0203549)** in view of **Ishikura (U.S. Patent # 5,239,684)**.

Consider **claims 3, 11, 15 and 19 as applied to claims 1, 9, 13 and 17 respectively**, Lee et al. disclose a display device (indication members 11).

However, Lee et al. fail to disclose that the display device is a liquid crystal display (LCD).

In the same field of endeavor, Ishikura discloses a display device (display unit 118) constituted by an LCD driver 118a and a liquid crystal display 118b (Figure 4; column 1 lines 23-25, column 1 lines 53-54, lines 61-62; and column 4 lines 47-49).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Ishikura with the teachings for Lee et al. for the purpose of providing an alternate form of the display device to indicate signal strength.

Consider **claim 4, as applied to claim 1 above**, Lee et al. disclose that the signal strength is displayed on the display device (indication members 11).

However, Lee et al. fail to disclose that the signal strength is displayed as a bar on the display device.

In the same field of endeavor, Ishikura shows and discloses the signal strength (field strength signal) is displayed in five stages, and the shadowed portions indicate bars (segments) being lit, which means that the greater number of bars (segments) being lit, the stronger the signal (field strength signal) (Figure 5, column 4 lines 55-64).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate bars (segments) displayed on a display device as taught by Ishikura into the teachings of Lee et al. for the purpose of indicating the signal strength for viewing by a human user in an alternate form using bars.

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10. **Claims 5-6, 12, 16, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al. (U.S. Patent Application Publication # US 2004/0203549)** in view of **Coverdale et al. (U.S. Patent # 5,809,414)**.

Consider **claim 5, as applied to claim 1 above**, Lee et al. show and disclose a control unit (drive circuit 30) ([0042], and [0044]-[0045]).

However, Lee et al. fail to disclose a sound generator unit, wherein the control unit selectively generates a sound using the sound generator unit based on the signal strength.

In the same field of endeavor, Coverdale et al. disclose a sound generator (noise source 58), wherein the control unit (control module 60) selectively generates a sound using the sound generator unit (noise source 58) based on the signal strength (column 3 lines 30-37, and column 4 lines 22-28).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the sound generator (noise source 58) to generate a sound to indicate signal strength as taught by Coverdale et al. into the teachings of Lee et al. for the purpose of indicating signal strength audibly.

Consider **claim 6, as applied to claim 1 above**, Lee et al. show and disclose a control unit (drive circuit 30) ([0042], and [0044]-[0045]).

However, Lee et al. fail to disclose that the control unit generates a sound if the signal strength falls below a threshold.

In the same field of endeavor, Coverdale et al. disclose a control unit (control module 60) that generates sound if the signal strength falls below a threshold (out of

range, Threshold 1, and Threshold 2). To provide the out-of-range alerting indication, Threshold 2 is chosen as the value of RSSI where the signal strength begins to degrade rapidly. Threshold 1 is chosen as the value of the received signal strength at which the warning or indication should start (column 3 lines 30-37, column 3 lines 53-57, column 4 line 67-column 5 line 2, and column 4 lines 22-28).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Coverdale et al. with the teachings of Lee et al. for the purpose of indicating signal strength audibly by generating a sound, more specifically, when the signal strength falls below a threshold such as moving out of communication range.

Consider **claim 12, as applied to claim 9 above**, Lee et al. disclose a method for indicating signal strength for a wireless network card (Figure 2, [0011], and [0027]).

However, Lee et al. fail to disclose the method for indicating signal strength encompasses generating a sound indication in response to the signal strength falling below a threshold level.

In the same field of endeavor, Coverdale et al. disclose a sound generator (noise source 58) that generates a sound if the signal strength falls below a threshold (out of range, Threshold 1, and Threshold 2) (column 3 lines 30-37, column 3 lines 53-57, and column 4 lines 22-28).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Coverdale et al. with the teachings of Lee et al. for the purpose of indicating signal strength audibly by

generating a sound, more specifically, when the signal strength falls below a threshold such as moving out of communication range.

Consider **claim 16, as applied to claim 13 above**, Lee et al. disclose an indication (indication members 11) for indicating the signal strength (Abstract, Figure 1, Figure 3, [0024], and [0042]).

However, Lee et al. fail to disclose the indication is a sound indication that is generated in response to the signal strength falling below a threshold level.

In the same field of endeavor, Coverdale et al. disclose a generating means (noise source 58) for generating a sound indication when the signal strength falls below a threshold (out-of-range, Threshold 1, and Threshold 2) (column 3 lines 30-37, column 3 lines 53-57, and column 4 lines 22-28).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the generating means taught by Coverdale et al. into the teachings of Lee et al. for the purpose of indicating signal strength audibly by generating a sound, more specifically, when the signal strength falls below a threshold such as moving out of communication range.

Consider **claim 20, as applied to claim 17**, Lee et al. disclose a method for indicating a signal strength which is inherently composed in a computer program product in a computer readable medium (wireless network card 10) (Abstract, [0011]-[0015], [0027]-[0032]).

However, Lee et al. fail to disclose fourth instructions for generating a sound indication in response to the signal strength falling below a threshold level.

In the same field of endeavor, Coverdale et al. disclose a method for providing a sound indication (audible indication) when the signal strength falls below a threshold level (moving out of communication range) where the fourth instructions generate a sound indication (noise source 58) in response to the signal falling below a threshold level (out-of range, Threshold 1, and Threshold 2) (column 2 lines 37-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the fourth instruction for generating a sound indication as taught by Coverdale et al. with the teachings of Lee et al. for the purpose of indicating signal strength audibly by generating a sound, more specifically, when the signal strength falls below a threshold.

11. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al. (U.S. Patent Application Publication # US 2004/0203549)** in view of **Kannis (WO 01/48612 A1)**.

Consider **claim 8, as applied to claim 1 above**, Lee et al. disclose that a data processing system (notebook computer) is used to power the wireless network apparatus (wireless network card 10) when the wireless network apparatus is connected to the data processing system ([0004]).

However, Lee et al. fail to disclose that power can be supplied to the wireless network apparatus (wireless network card 10) with the use of a battery located within the housing that can be used when power is unavailable from a data processing system.

In the same field of endeavor, Kannis discloses that a communications apparatus comprises a portable power source, such as one or more batteries (page 3 lines 30-33, and page 6 lines 4-7).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate one or more batteries within the wireless network apparatus as taught by Kannis into the teachings of Lee et al. for the purpose of including a portable power supply to supply independent power.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mulford et al. (U.S. Patent # 5,991,901)

Sato (U.S. Patent # 6,148,180)

McCune, Jr. (U.S. Patent # 6,850,736 B2)

Oesterling (U.S. Patent Application Publication 2004/0203436 A1)

Fijisawa et al. (U.S. Patent # 7,016,707 B2)

Korycan (U.S. Patent # 5,950,139)

Comp (U.S. Patent Application Publication 2004/0203698)

Peterson, III et al. (U.S. Patent Application Publication 2003/0194980 A1)

13. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450

Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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April S. Guzman

A.S.G/asg



RAFAEL PEREZ-GUTIERREZ
PRIMARY EXAMINER
5/24/06